

WHAT IS CLAIMED IS:

1. A bailer valve housing, comprising:
  - a cylindrical trailing end adapted for engagement with a cylindrical main body of a bailer;
  - said valve housing having a leading end with tapered sidewalls;
  - a free-floating ball disposed in said valve housing;
  - an annular valve seat formed in said leading end;
  - said annular valve seat formed flush with a leading edge of said leading end;
  - said free-floating ball valve having a diameter only slightly greater than a diameter of said annular valve seat;
  - about half of said free-floating ball valve extending downwardly from said leading edge of said valve housing;
  - whereby liquid fluid in said valve housing is captured within said valve housing when said free-floating ball valve is fully seated in said annular valve seat;
  - whereby said liquid fluid captured within said valve housing occupies all of said valve housing, being flush with said leading end of said valve housing so that no air pocket is formed between said liquid fluid and said leading end;
  - whereby said liquid fluid is drained from said valve housing when said free-floating ball valve is unseated from said annular check valve; and
  - whereby said liquid fluid does not encounter oxygen during said draining because the flush positioning of said annular valve seat with the leading edge of said valve housing prevents formation of an annular air pocket at said leading edge.
2. The bailer of claim 1, further comprising:
  - said free-floating ball having a spherical configuration.